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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/726,244

12/02/2003

John J. Simbal

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10/18/2006

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EXAMINER

STAHL, MICHAEL J

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/726,244

Applicant(s)

SIMBAL, JOHN J.

Examiner

Mike Stahl

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-28 and 30-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20-28 and 30-44 is/are allowed.
- 6) ☒ Claim(s) 1,3,4,9,10 and 14-17 is/are rejected.
- 7) ☒ Claim(s) 5-8,11-13,18 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 3/13/06, 8/16/06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

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***Information Disclosure Statement***

Attached are initialed copies of more citation forms, dated March 13, 2006 and August 16, 2006. The examiner has found that many of these listed references were cited in application 10/727220. If applicant feels the need to cite an additional set of references in the present application by way of an IDS, after receiving the present Office action, and knows of any other application in which the same set of references is also cited, then it is respectfully requested that applicant clearly identify that application so that the examiner might take a look at it.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-4, 9-10, and 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Parker (US 4897771).

Claim 1: Parker discloses a reflecting coupler, comprising: a body 2 having an aperture extending therethrough from a first side to a second side, an interior surface of the aperture being reflective, a first portion 10 of the interior surface conforming to a two-dimensional surface (a cylinder in the example) and a second portion 4 of the interior surface conforming to a three dimensional surface (elliptical in the example), the 2-D surface extending at least partially between the first and second sides of the body, wherein the first portion is disposed proximate

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the first side of the body and the second portion is disposed proximate the second side of the body. See fig. 1.

Claim 3: In an alternate embodiment, a first aperture edge at the first side of the body is rectangular in shape (fig. 10).

Claim 4: The aperture of the fig. 1 embodiment defines a second aperture 8 edge at the second side of the body, the second aperture edge having a circular shape.

Claim 9: A reflector axis A is defined longitudinally along the center of the aperture between the first and second sides, and the 2-D surface is a surface comprising a surface formed with respect to a 2-D surface axis.

Claim 10: The 2-D surface axis is coincident with the reflector axis.

Claim 14: The aperture defines a second aperture edge at the second side of the body, the second aperture edge conforming substantially to the 3-D surface (the edge of aperture 8 is contiguous with the 3-D surface of second portion 4).

Claim 15: The 3-D surface is a surface of revolution.

Claim 16: A reflector axis A is defined longitudinally along the center of the aperture between the first and second sides and the surface of revolution is a surface of revolution about the reflector axis.

Claim 17: In an alternate embodiment, the surface of revolution may be a paraboloidal surface (col. 9 lns. 25-29).

***Response to Arguments*** (July 24, 2006 Remarks)

The argument that the Parker reference does not include an aperture in the back reflector 5 is not persuasive, because the reference teaches an “axial hole” 11 in the back reflector 5 (fig. 1; col. 5 lns. 54-58). This hole is regarded as an aperture. Therefore the rejection under Parker has been substantially maintained (the only change was to account for the absorption of claim 2 into claim 1).

The arguments regarding the Cerone reference are persuasive to the extent that the limitations from original claim 2 were incorporated into claim 1, and original claim 2 was not rejected under Cerone. The rejection under Cerone is withdrawn.

As to the Davenport reference, the remarks allege that a conical surface is not a 2-D surface according to the definition of a 2-D surface in the specification. The examiner also notes that the specification identified a cone as an example of a 3-D surface, not a 2-D surface (p. 9). Therefore, based on applicant's definition which happens to exclude cones from the set of 2-D surfaces, the rejection under Davenport is withdrawn. It is noted that the remarks, by stating that the cone section in Davenport fig. 4 has a radius of curvature in the plane of the drawing, imply that the condition of having a radius of curvature (R) in more than one plane includes the case of  $R = \infty$ .

The arguments regarding the Igram reference are persuasive to the extent that the limitations from original claim 29 were incorporated into claim 27, and original claim 29 was identified as containing allowable subject matter in the last Office action. The rejection under Igram is withdrawn.

*Allowable Subject Matter*

Claims 20-28 and 30-44 are allowed. Claims 5-8, 11-13, and 18-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The allowable subject matter of claims 5-8, 12-13, 18, and 39-44 was explained in the last Office action (mailed February 23, 2006).

As to claims 11 and 19, Parker is the only reference still applied to base claim 1 (note "Response to Arguments" section above). Parker fails to disclose or suggest the limitations of claims 11 or 19 in combination with all the elements of claim 1.

As to claim 20, the only reference applied against it in the last action was Davenport. That rejection has been withdrawn as indicated in the "Response to Arguments" section above. None of the references of record teach or suggest an optical system including all the elements of claim 20. Claims 21-26 depend from claim 20.

Claim 27 is allowed since it was amended to include the limitations from original claim 29, which was identified in the last action as containing allowable subject matter. Claims 28 and 30-38 depend from claim 27.

*Conclusion*

Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Inquiries about this letter should be directed to Mike Stahl at 571-272-2360. Inquiries of a general or clerical nature (e.g., a request for a missing form or paper, etc.) should be directed to the technical support staff supervisor at 571-272-1626. Official correspondence which is eligible for submission by facsimile and which pertains to this application may be faxed to 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Questions about the Private PAIR system should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mike Stahl MSS  
Patent Examiner  
Art Unit 2874

October 5, 2006



SUNG PAK  
PRIMARY EXAMINER